ThomasCommunications
& Technologies LLC

The Thomas Group
217 Montgomery Street, Suite 610
Syracuse, New York 13202
Phone (315) 426 - 8445
Fax (315) 426 - 8348
cda@ TheThomasGroup.com

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Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, S.W.
Washington, DC 20554

Re: CC Docket No.02-6
Schools and Libraries Universal Service Support Mechanism
Dark Fiber Eligibility

Dear Secretary Dortch,

Thomas Communications and Technologies, LLC provides both E-rate and telecommunications consulting services to numerous School Districts in the Northeast region. Some of our most successful consulting projects have led to District-wide networks that connect schools within a District and interconnect Districts to regional information centers via high-speed communication services provided by E-rate eligible telecom providers.

As technology moves forward our service recommendations have rapidly moved from traditional, dedicated, copper-based, point-to-point methodologies (most common in our marketplace is the T-1 circuit) to high-speed fiber-based services. The high bandwidth options fiber offers our K-12 clients is clearly the transport media of choice as we converge voice and video services with conventional data services for our clients.

After evaluating high-speed service choices, it is clear our K-12 clients benefit greatly from having dark fiber as a service option. We have designed and overseen the construction of numerous dark fiber networks in areas where other competitive high-speed services were either not available or not as cost-effective. We believe it is most important to retain as many service choices as possible – dark fiber included – for our clients.

The Importance of choices:

- Schools are regionalized and School Districts may include a city as well as surrounding areas – not all of which have uniform availabilities of traditional tariffed services.

- School Districts frequently include sites that are served by multiple regional telephone companies and interconnection between companies is difficult to manage and very

costly.

- Per E-rate guidelines, our methodology is to seek competitive proposals using a bid-based process. This provides the most cost effective services for our clients. In some regions existing infrastructure build-outs offer the lowest cost to our clients – usually via gigabit Ethernet. In other areas dark fiber is far more cost effective. We seek choices for our clients and help them select the best choice for their own schools. This reduces overall cost and allows our clients to maximize the use of the supporting funds – including local share, state and regional share, as well as federal E-rate share.

The importance of Dark Fiber as a Choice:

- Dark fiber frequently offers the lowest cost option. We have on file documentation of several bids that prove this.

- Dark fiber is universally adaptable to the interconnection of existing topologies, including traditional PBX-style as well as IP-based telephony, IP and traditional video transmission, and high-speed data networks of Gigabit speeds.

- Dark fiber frequently eliminates the need for routing at each site – a very expensive and high overhead part of any Wide Area Network.

- Dark Fiber is the most secure topology available.

- Dark Fiber can handle speeds of 10 gigabits for our clients now – there is no other choice for any competitively priced services at these speeds.

- Dark fiber is frequently the lowest cost service not only to build, but to support and maintain over time.

- Dark fiber can be easily utilized for segments of a Wide Area Network where high-speed connectivity is not readily available and can easily supplement other services such as Gigabit Ethernet.

- Dark Fiber is the most basic standard in high-speed communications and is adaptable to virtually every tarriffed service type. It offers a sound long-term platform that no other service can ever offer.

Gigabit Ethernet is the most common implementation our clients utilize when we design dark fiber networks. However, the standards and protocols regarding Ethernet continue to evolve and undergo changes in layers 3, 4, and 5, particularly in the handling of Quality-of Service and Security/User Authentication. Traditional services providers have not been able to standardize their handling of these components in an eligible E-rate service offering.
Dark fiber services, like point-to-point T1s, allow school districts to connect their equipment

and use the available bandwidth as they choose. In the case of T1s, E-rate applicants can multiplex the available bandwidth (even use compression techniques) for multiple applications using methods transparent to the service provider. Users of T1 bandwidth utilize it in the same way they utilize dark fiber. They attach equipment allowing them to leverage the available bandwidth as much as possible. Whether or not the service provider has a role in placing a signal onto the cable they provide in support of the services they offer is not a factor in how E-rate applicants build and support their network infrastructures. When a link goes down, be it a T1 or a dark fiber connection, and the source of the problem is determined to be the responsibility of the service provider, the provider gets a trouble call. It is that simple.

E-rate applicants, like all other ineligible entities, should be able to decide if lit fiber services or dark fiber services are more or less advantageous to their network plans. Restricting dark fiber offerings is a disservice to those who seek competitively priced high-speed telecommunications services.

Sincerely,
THOMAS COMMUNICATIONS & TECHNOLOGIES, LLC

Claude Adair
Executive Manager – E-Rate Services

Mark Malkin
Telecommunications Engineer